196 secretly replaces the object in the new thatch. A white ox is sacrificed at the well.

The information collected on this ceremony is still fragmentary but the color of the clothing worn by those officiating, that of the victim, the number of bands of the loin-cloth, and the number of cowrie shells given by the griot to his sister, the origin of the gravel used as the seat for the Kéita are evidence that we have here a ritual executed under the protection of Faro (see Chap. II)

175 As early as the fourteenth century numerous travelers described the Bambara /xv/as organized into small groups headed by a chief and more or less submitting to the neighboring empires. This state of affairs lasted until the period of the Peul invasion of this region (in the seventeenth century) which founded two kingdoms and created a local aristocracy of mixed Peul and Bambara blood. The first of these kingdoms was that of Ségou, the history of which is partly known (1). The investigations centered particularly in this area; the chief

1. On the history of the Bambara we refer the reader to the well documented volume of L. Tauxier. Histoire des Bambara.

town which was a capital for a long time retains the traces of a well [197] organized legal system and religion. It is also in this area that, according to specialists, the purest dialect is spoken. (2)

[556 191] 2. The children of families sufficiently wealthy to afford it were formerly sent to Ségou to live with affinals in order to learn how to speak well an elegant and pure language.

197 The Bambara dialects belong to the sub-group of Mandingo languages 2/2 of the Nigero-Senegalese group. (3) The Bambara know certain

3. See A. Meillet et M. Cohen. Les Langues du Monde /Languages of the World/, p. 546.

197 systems of signs and ideograms which may be considered as a sort of
212 writing and the study of which is currently pursued. The system from which all the others supposedly stem, the glã glã zo, has 226 ideograms which, according to informants, summarize the knowledge of the
[502] Bambara (1). On the other hand, the Bamba use a numerical system

1. See. p. 21. This system and two of the ideograms, of which to designates the mash of boiled cereals and by extension nourishment in general, will be the object of a comment by M. Griaule and G. Dieterlen. "Signes graphiques des Soudanais. L'Homme. /Graphic signs of the Sudanese man/." Cahiers d'ethnologie, de géographie et de linguistique, Hermann (in press).

On certain types of writing observed among the Mandé and the Vai, see J. Février, Histoire de l'écriture /The History of Writing/, pp. 528-529.

based on twenty. Moreover, an analysis of the texts collected, some of them quoted in this essay, has brought to light an /xvi/ important number of words which, according to informants, belong to an ancient language of Mandingo origin, now used as liturgical language. It is not within the framework of this essay to present this material or to comment upon it, but it is appropriate to note that the study of this vocabulary would contribute to an understanding of religious thinking among the Bambara.

173 The Bambara have a rather clear idea of their early history and even of their prehistory. They describe their ancestors with precision and know the phases of development of their technology. These premises are necessary to an understanding of their religion which, like the other institutions, is especially linked to this technological development. Moreover, the only observable remains comprise household furniture and utensils, transient but perennial material whose forms and ornamentation indicate the metaphysical principles on which their way of thinking is based.

177 It is appropriate not to neglect those influences which have acted
121 upon the Bambara through their contacts with other Sudanese tribes

*173 814 217 212 These, in brief, are the difficulties encountered in dealing with sources for native historical tradition. When Islam introduced [25] a written language, there was created a new category of archivists, the marabouts. They have added this duty to many others; it cannot be proved that they have purged the job of its former vices, but it may be stated categorically that they have added a few new ones.

It is notorious that, in the Sudan, the Moslem traditionists have an ineradicable tendency to transpose everything into their own mentality. Further, since a manuscript gives a kind of quasi definitiveness to the oral tradition, including all its errors, it becomes almost impossible to eliminate these errors because of the unquestioning respect usually accorded a written document.

*173 814 [177] There are also the non-literate Moslem traditionists: ordinary dyeli who have been converted in the usual Sudanese fashion, as described in Chapter 6, and who have abandoned none of the characteristics of their caste. They have merely added a few peculiarities due to Moslem influence.

114 In drawing on these sources, European publications add new reasons for doubt. Most especially, because of a desire -- legitimate, in principle -- to bring some sort of order out of the incoherent mass of traditions, but also because of a need to make them fit a personal theory, the European author takes refuge in an hypothesis. Now there is no objection to this, assuming that the hypothesis on which the author bases his theories is clearly stated. Too often, however, the hypothesis is so well concealed or even so intricately entwined in the tradition that it is impossible either to discover what it is or to set an exact limit to its range. This new metamorphosis of tradition is not the least dangerous for historical truth.

115 *173 It is to two non-literate Moslem dyeli that I am indebted for the traditions concerning the Ségou and Kaarta clans. My interpreter, Souleïman Goundiamou (1), whose services as a

1. Now chief of the village of Ambidédi (Gadiaga).

guide and informant on native matters were invaluable to me, gave

192 with nature; the same terms designate the parts of animals, plants, or even objects. These words serve as roots, as do the names of the four elements and of their properties. Two consequences follow:

1. A great ease in forming compound words; 2. The existence
[194] of a multiplicity of homonyms which we can distinguish only by the context, but which the natives distinguish by differences in tone or in vowel length.

E. Numeration

802 In contrast to the Ouolof and Peul, who first count to five and then say "five and one," "five and two," etc., the Bambara have a different name for each number from one to ten (the word "five," doulou, [16] comes from "hand"; the word "ten", tan, from "to thank," to give both hands). After ten, they count "ten and one," "ten and two," up to 20, which is said as two tens, then three tens, four tens, etc., up to 80. The series begins again after 80 as it does in French after 100.

The Bambara have graphic signs to represent numbers. These
212 signs have been studied by S. de Ganay (1).

1. S. de Ganay, "Graphie Bambara des nombres" [Bambara Number Writing]. [Ed., Journal de la Société de Africanistes, No. 2, 1950.]

[184] The graphic system varies with regions and sometimes from one village to another, but the most widespread method uses a series of vertical lines, each line representing a unit. To indicate that the number is doubled, the lines are placed inside a circle or crossed by a horizontal bar: |||| or ⦶ or ╫ = four. To indicate an uneven number, a line is added under the horizontal bar.

But a line may indicate not only a unit, but a group of ten, and even a "hundred," keme (whose value is 80). To keep this clear, an arc is put over the line: ⌒ = 80.

212 Some systems represent ten by ten lines or by five barred
801 lines under a single line. This method has a religious origin; it recalls that "creation is the issue of a unique principle symbolized

212 801 by numbers, and notably by ten, which may be obtained, among other ways and if it's a question of representing the Creator, by adding the first four numbers, or by adding the number five to [776] itself." Ten is the numerical symbol of Faro (god of water); it symbolizes what is just, true, perfect, and complete.

The symbolism of numbers is used in divination: a first [787] group of eight signs, called the secret count, reproduces the seven first numbers which, according to a Bambara myth, were engraved in space at the instant that the Creator by his word formed the universe. They contain the whole universe.

These numerical signs were ritually traced on the most varied occasions.

[802] Finally, we must note the existence of the sign for "nothing," fu gundo, zero, which stands at the beginning of a series of 196 numerical signs used by those who practice arithomancy.

The word Mandé, of central significance for 44 peoples, may be interpreted, according to some, as manin (the secret name for ten), number of unity and of the cultural community.

F. Writing

212 For everyday use, the Bambara have adopted arabic characters, called by them "writing of the Blacks." In fact, only those who have studied in the Marabouts' schools know how to read or write them. No written literature, properly speaking, exists. A 538 large store of traditions, epics, tales, legends, songs, and proverbs is transmitted orally from generation to [17] generation by professional storytellers, the griot. Moreover, the whole sum of sci- 867 entific, juridical, ethical, and practical knowledge is taught orally 868 in the course of daily life or during long years of initiation. Certain old masters renowned for their learning are consulted from far distances when a chief is in doubt on a point of tradition.

212 Nevertheless, signs do exist for a secret writing that the priests, the heads of families, or blacksmiths draw on the sanctuaries, on masks, furniture, clothing, cabin walls, or in the sand.

212 For the Bambara, things exist by signs. These signs have at- 812 tached themselves to things, calling them to consciousness and to the attention of man.

212 812 From the central core of creation four categories of signs have emerged, 266 in all, which represent the complete signs of the world; they give color, form, and matter to things. In time these 266 signs came to head lists of an infinity of other signs encompassing all of creation.

"It is by these signs that man enters into possession of the greatest part of his domain, which is the universe. And in the measure that he does not know a sign, that he cannot analyze it, that is, possess it in its component parts, he finds certain sectors of the total knowledge of things closed to him." (1)

1. M. Griaule and G. Dieterlen, Signes graphiques soudanais [Sudanese Graphic Signs].

815 The Bambara, like the Dogon, represent the movement of the stars graphically as well as mathematically, and, in particular, the revolution of the sun around the earth, center of the cosmos. These movements are measured by a cylindrical granary that they use as gnomon (wati dyati dyiginye); it is a round structure of seko [plaited walling?] with a conical roof, constructed according to precise measurements. It rests on a small packed mound in the form of a square which has first been carefully measured and oriented. Twenty-two stones are buried in each angle of the square, and 22 more in the center. Three rows of four big stones are oriented east-west on the little hill: one row on the southern side, one to the north, and one in the middle. Small wooden beams are laid on these rows. Each part and each measurement has a symbolic meaning. The gnomon serves to determine the dates of the solstices and the equinoxes by the observation of its shadow on the ground. (2)

2. D. Zahan, "Un gnomon soudanais" [A Sudanese Gnomon], Africa, 1950.

805 815 The diurnal and annual movements of the sun are represented by a zigzag line, . Certain variations in the form of the zigzag represent the procession of the equinoxes and the variable length of the days in summer and winter, . Four angles represent the four cardinal points, and each of the lines that make up

805 815 the angles represents 90 days (the year, for the Bambara, is 360 days). The symbols are not merely mathematical; they form part of the daily life of the society. [18] The zigzags are a characteristic theme [531] in the decoration of pottery, weapons, tools, sanctuaries, and houses. One finds them in agricultural techniques and in ritual dance figures. The universal rhythms of the earth and sky echo through all the activities of man and society. (1) Finally, another series of 16 signs 212 [787]

1. Id., "Conception de l'écliptique chez les Dogons et les Bambara" [The Dogon and Bambara Conception of the Ecliptic], [Ed., Africa, 1951.]

is habitually used in geomancy. It is interesting to note that these signs were used in a practical manner for correspondence. The Bambara chiefs used multiple combinations of them to send each other messages.

G. Local Diversities

197 Given the extent and the diversity of the regions where Bambara is spoken, it is no wonder one notices differences in pronunciation, and even in structure and vocabulary, from one province to another. At Kaarta the speech is not the same as at Ségou, and a Bambara of Ségou has trouble understanding a Bambara of Bougouni. This is due partly to the influence of other languages which are in contact with Bambara and which ultimately alter and modify it, and partly to the normal evolution of language within a group separated for centuries from its place of origin. It is interesting to note that in the Bougouni circle the conservatives in speech are the old men, while the women are the evolutionary element.

191 Traditionally, Ségou was considered the center for the most elegant Bambara speech. Before the conquest, children were sent to Ségou to learn the purest Bambara.